REMARKS

The comments below address the rejections made in the Examiner's Answer dated March 8, 2004.

Rejections Under 35 USC 103

The Examiner rejected Claims 10-14 on the grounds that they were clearly obviated by XP-000874467 (Alonso). The rejection should be withdrawn in view of the remarks below. In view of the modifications above, the rejection is moot.

B. Rejection of Claim 15 Under 35 USC 103 over Alonso in view of FR 2 294 133

The Examiner rejected Claim 15 under 35 USC 103 over Alonso in view of FR 2 294 133 (FR '133). The response below refers to new Claim 10.

The rejection should be withdrawn. It is well settled that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification must have had a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970). The Examiner did not establish a *prima facie* case of obviousness.

Applicants' invention, as encompassed by Claim 10, relates to a process for preparing a tungsten carbide comprising gas phase carburization of tungsten powders and/or suitable tungsten precursor compound powders at a temperature ranging from 850°C to 950°C, wherein the carburizing gas phase used

is a CO_2/CO mixture with a CO_2 content which is above the Boudouard equilibrium content corresponding to the carburization temperature, and wherein the carburization is carried out with a carbon activity ranging from 0.4 to less than 1, thereby forming the tungsten carbide. The process further comprises subjecting the tungsten carbide made by the process according Claim 10 to a heat treatment at a temperature ranging from 1,150°C to 1,800°C after carburization.

FR '133 teaches obtaining WC by treating finely divided WO_3 with CO at a temperature at which no agglomeration or sintering action takes place to effect the following reaction $WO_3 + 5CO \rightarrow WC + 4\ CO_2$.

The rejection should be withdrawn. It is known by one skilled in the art that the specific surface area of powders made by thermal decomposition depends on the decomposition temperature. Increasing decomposition temperature results in decreasing specific surface area, Le. increasing particle size. To support this point, Applicants previously enclosed a copy of the publication entitled "Chemistry of Powder Production," (p. 106-113), which teaches this phenomenon for MgO (Figure 4.15) and BaTiO3 (See Figure 4.18).

Accordingly, one of ordinary skill in the art would have expected that heat treatment of WC at temperatures higher than the temperature of carburization would result in an increase of particle size of the WC-powder. In case such a powder is used to produce a liquid-phase sintered composite material, e.g., WC-Co (= hard-metal) the degree of dispersion of the WC-phase and hence the hardness of the composite material was supposed to decrease. Surprisingly, Applicants have discovered that is not the case. Instead, Applicants have discovered that the hardness increase (See Table 2, Example 1 (no heat treatment) vs. examples 2, 3 and 5 (heat treatment)) is observed.

In view of the foregoing amendments and remarks, withdrawal of the rejection of the pending claims is earnestly requested.

Respectfully submitted,

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